

and outlet ports is dedicated to one of said first and second mediums for flow therethrough;
a heat transfer package disposed within said casing, said heat exchange package

having a lengthwise extent and a widthwise extent, each of the fluid mediums following on their respective side of the planar elements a net flow path which extends longitudinally along the lengthwise extent, said package comprised of a plurality of generally rectangularly shaped planar elements continuously arranged in sequentially alternating directions in a folded accordion-like manner, each of said planar elements having substantially similar length, width and thickness with respect to each other, each of said planar elements integrally connected to an adjacent planar element along said length, said length and width of said casing substantially corresponding to said length and width of said package, opposing surfaces from each adjacent planar element defining an inter-layer space therebetween for receiving a flow of one of said fluid mediums therebetween, a direction of flow of each medium having a widthwise element and a lengthwise element when flowing within said inter-layer space, each of said planar elements having a corrugated pattern formed therein;

said corrugated pattern extending the entire length and width of each respective planar element, said pattern corresponding to a series of alternating linear ridges and channels extending across the entire width of each respective planar element, said corrugated pattern interrupted at substantially similar intervals to include a fold line for facilitating arranging each of said planar elements in an accordion-like manner, said fold lines defining said width of each respective element and being disposed parallel of said length of each of said elements, wherein when said heat transfer package is in an unfolded state, a pair of ridges and channels of a first planar element is generally aligned with respect to a pattern of channels and ridges of a successive planar element, and

whereby said flow path has means for creating a flow resistance to said respective medium such that a resistance to flow of said respective flow medium flowing over said respective side of said planar elements such that a resistance to flow of each fluid medium is greater in said lengthwise direction of said heat transfer package than said widthwise direction, thereby increasing flow turbulence and heat transfer.

10. A recuperative heat exchanger as claimed in claim 9 wherein:
Said casing is sealed at said top and bottom ends by covering elements.
11. A recuperative heat exchanger as claimed in claim 10 wherein:
Said covering elements are formed from a compound which solidifies by cooling or by chemical reaction.